

REMARKS

Claims 16, 17, 28, 29 and 36 have been amended. Claims 1-45 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 101 Rejection:

The Office Action rejected claims 16, 17 and 28-40 under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. As indicated above, claim 16 has been amended to correct a dependency, and claims 17, 28, 29 and 36 have been amended to recite non-transitory machine-readable storage media/medium, as suggested by the Examiner. Therefore, Applicants respectfully request removal of the rejection of claims 16, 17 and 28-40 under 35 U.S.C. § 101.

Section 103(a) Rejections:

The Examiner rejected claims 1, 2, 4-7, 9, 11, 12, 14, 15, 17-21, 23-34, 36-38 and 40-43 under 35 U.S.C. § 103(a) as being unpatentable over Suri, et al. ("Strong Mobility and Fine-Grained Resource Control in NOMADS") (hereinafter "Suri") in view of Dan et al. (U.S. Patent 5,825,877) (hereinafter "Dan"), claims 3, 44 and 45 as being unpatentable over Suri in view of Dan and further in view of Courtrai, et al. ("Resource Management for Parallel Adaptive Components") (hereinafter "Courtrai"), claim 8 as being unpatentable over Suri in view of Dan and further in view of Chambliss et al. (U.S. Patent 7,228,354) (hereinafter "Chambliss"), claim 10 as being unpatentable over Suri in view of Dan and further in view of Lin et al. (U.S. Patent 6,122,663) (hereinafter "Lin"), and claims 13, 16, 22, 35 and 39 as being unpatentable over Suri in view of Dan and further in view of Belissent (WO 02/01834 12) (hereinafter "Belissent"). Applicants respectfully traverse these rejections for at least the following reasons.

Regarding claim 1, the cited art fails to teach or suggest *determining if servicing a*

consume request for a resource would cause a threshold rate that corresponds to the requested resource to be exceeded, wherein the consume request is received from one of a plurality of resource consuming isolates that are bound to one of a plurality of resource domains in which one or more respective resource policies for the requested resource are installed, and wherein the consume request specifies a measurable, consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates. The Examiner admits that Suri does not teach these aspects of Applicants' claim and relies on Dan to teach them. Dan is directed to a form of authentication for portable trusted software in which program code is encapsulated or associated with a certificate from a trusted third part and an access control list (ACL) that describes the permissions and resources required to execute the program code. A client that downloads the code or access list can verify the integrity of the code/access list and the system can enforce the access list such that the permissions and resources described in the access list are not exceeded.

The Examiner submits that Dan teaches that *a consume request is received from one of a plurality of resource consuming isolates that are bound to one of a plurality of resource domains* in columns 1 and 3, stating, "wherein multi-user profiles are bound to the client side using access control, it is implicit in Dan teaching that user is actually a user profile that is bound to the resources in the client side." It is not clear whether the Examiner is attempting to equate a user profile, a multi-user profile, or some other entity to the one of a plurality of resource domains recited in Applicants' claim. However, Applicants note that nothing in Dan describes user profiles or multi-user profiles. Instead, Dan merely describes that a user may select options associated with the certification of a program, that different users can be allocated different resources and permissions in the recipient system for the same program code, and that the determination of the set of resources and permissions allowed to different users can be determined during installation of the code or during execution of the code. **Furthermore, Applicants assert that these user-specific sets of resources and permissions teach absolutely nothing about the relationships between the resource consuming isolates, resource domains, requested resources, and resource policies recited in Applicants'**

claim. For example, nothing in Dan (or Suri) describes that a plurality of resource consuming isolates are bound to one of a plurality of resource domains in which one or more respective resource policies for a requested resource are installed, as required by Applicants' claim. Instead, Dan describes that each instance of the program code downloaded to a client is associated with a specific instance of the ACL encapsulated or associated with that program code, and that this specific ACL instance (which is also downloaded to the client) describes the resources required to run the downloaded program code on the client machine. In other words, in Dan there is no mapping (much less a binding) of multiple isolates to a single resource domain that includes resource policies for a requested resource, much less a binding of multiple isolates to one of a plurality of such resource domains, as in Applicants' claim.

The Examiner submits that Ramamurthy et al. (US 7,080,077), which was cited in a previous action, teaches, "that users bound to resources on the client that these users are actual profile bound to the resource isolate." It is unclear what the Examiner's remarks are meant to explain, as they do not appear to have anything to do with the limitations of Applicants' claims and include terms that are unclear (e.g., "resource isolate"). In addition, Applicants note that the Examiner previously agreed that the types of resources managed in Ramamurthy are not analogous to the measurable, consumable resources of Applicants' claim. Ramamurthy is not even on of the references listed in the statement of the rejection. Thus, the reliance on Ramamurthy is improper.

The Examiner also submits that Dan teaches, "wherein the ACL enforcer is enforcing one or more policies for the requested resources by the code installed by users profile bound to the resources of the client side." Applicants is again unable to determine the meaning of these remarks, as the phrase "users profile bound to the resources of the client side" has no basis in the reference itself and does nothing to teach any of the limitations of Applicants' claim. For example, Applicants' claim does not recite the binding of any user information (such as a user profile or other user-specific set of resources and permissions) to a resource, but instead recites that (a plurality of) resource consuming isolates are bound to (one of a plurality of) resource domains that include

resource policies for a requested resource.

Further regarding claim 1, the cited art fails to teach or suggest *wherein the threshold rate is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the one of the plurality of resource consuming isolates; wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the requested resource with the plurality of resource consuming isolates that are bound to the one of the plurality of resource domains; and wherein an isolate is a set of one or more computations that do not share computational state with other computations.* The Examiner admits that Suri does not teach these aspects of Applicants' claim and relies on Dan to teach them. Specifically, the Examiner submits that Dan teaches this aspect of Applicants' claim in columns 1, 3, 4, and 5, stating, "wherein the consumption rate limit is enforced on the client side for all the resources that exists on the client which services multi-user profile needs." Applicants again assert that Dan does not teach "multi-user profiles" or anything else that is analogous to the one of the resource domains of Applicants' claims, i.e., wherein the threshold rate is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the one of the plurality of resource consuming isolates; wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the requested resource with the plurality of resource consuming isolates that are bound to the one of the plurality of resource domains. No such relationships, associations, or bindings between resource policies, requested resources, resource domains, and/or resource consuming isolates are described in Dan (or Suri).

Applicants respectfully remind the Examiner that to establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. As discussed above, the cited references fail to teach or suggest the relationships between the resource consuming isolates, resource domains, requested resources, and resource policies recited in the above-referenced limitations of Applicants'

claim.

The Examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri and Dan “because Dan teaching of consumption limit policy associated with the resource and resource requests would improve system performance and efficiency in resource usage based on set policy to protect the system from greedy resource consumers and bottlenecks.” Applicants first note that Suri already includes mechanisms for enforcing resource limits, including rate limits, quantity limits, and space limits without being combined with Dan (see, e.g., section 3.2). Applicants further note that the Examiner has not stated any explanation of how or why she believes the combined references would improve system performance and efficiency over the mechanisms already in place in Suri. Finally, as discussed in detail above, since neither reference teaches any of the relationships between the resource consuming isolates, resource domains, requested resources, and resource policies recited in Applicants’ claim, even if the references were combined, they would not result in Applicants’ claimed invention.

For at least the reasons stated above, Applicants assert that the Examiner has failed to establish a *prima facie* rejection of claim 1.

Independent claim 18 includes limitations similar to those of claim 1 discussed above and was rejected using similar reasoning. For example, claim 18 includes the following: managing consume requests for a resource that are received from a plurality of computations that consume the resource and that are bound to one of a plurality of resource domains in which one or more respective resource policies for the resource are installed, wherein each of the consume requests specifies a measurable, consumable resource to be consumed during execution of one of the plurality of computations... and wherein the threshold is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the plurality of computations, wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the resource with the plurality of

computations that are bound to the one of the plurality of resource domains. Therefore, the arguments presented above apply with equal force to this claim, as well.

For at least the reasons stated above, Applicants assert that the Examiner has failed to establish a *prima facie* rejection of claim 18.

Independent claim 29 includes limitations similar to those of claim 1 discussed above and was rejected using similar reasoning. For example, claim 29 includes the following: a plurality of resource domains that each associate one or more respective resource policies for a requested resource with a plurality of resource consuming isolates that are bound to the resource domain... wherein consume requests for the requested resource are received from one of the plurality of resource consuming isolates that are bound to one of the plurality of resource domains, and wherein each of the consume requests specifies a measurable, consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates; and wherein the threshold is specified in one of the one or more respective resource policies for the requested resource installed in the one of the plurality of resource domains that are bound to the one of the plurality of resource consuming isolates. Therefore, the arguments presented above apply with equal force to this claim, as well.

For at least the reasons stated above, Applicants assert that the Examiner has failed to establish a *prima facie* rejection of claim 29.

Independent claim 36 includes limitations similar to those of claim 1 discussed above and was rejected using similar reasoning. For example, claim 36 includes the following: a plurality of resource domains each associating one or more respective resource policies for a resource with a plurality of resource consuming isolates that are bound to the resource domain; a first sequence of instructions determining if servicing a consume request from one of the plurality of resource consuming isolates that are bound to one of the plurality of resource domains will cause a threshold to be exceeded, wherein the consume request specifies a measurable, consumable resource to be consumed during

execution of one or more computations of the one of the plurality of resource consuming isolates; and wherein the threshold is specified in one of the one or more respective resource policies for the requested resource installed in the one of the plurality of resource domains. Therefore, the arguments presented above apply with equal force to this claim, as well.

For at least the reasons stated above, Applicants assert that the Examiner has failed to establish a *prima facie* rejection of claim 36.

Independent claim 41 includes limitations similar to those of claim 1 discussed above and was rejected using similar reasoning. For example, claim 41 includes the following: means for throttling requests for a resource that are received from a plurality of resource consuming isolates that are bound to one of a plurality of resource domains in which one or more respective resource policies for the resource are installed to comply with a threshold, wherein each of the requests specifies a measurable, consumable resource to be consumed during execution of one or more computations of one of the plurality of resource consuming isolates... and wherein the threshold is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the plurality of resource consuming isolates, wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the resource with the plurality of resource consuming isolates that are bound to the one of the plurality of resource domains. Therefore, the arguments presented above apply with equal force to this claim, as well.

For at least the reasons stated above, Applicants assert that the Examiner has failed to establish a *prima facie* rejection of claim 41.

Applicants assert that numerous ones of the dependent claims recite further distinctions over the cited art. Applicants traverse the rejection of these claims for at least the reasons given above in regard to the claims from which they depend. Since the rejections have been shown to be unsupported for the independent claims, a further

discussion of the dependent claims is not necessary at this time. Applicants reserve the right to present additional arguments.

CONCLUSION

Applicants submit the application is in condition for allowance, and an early notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/6000-33300/RCK.

Respectfully submitted,

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